

PENDING CLAIMS

1. (Original) A method of automatic generation of horizontal synchronization of an analog signal to a digital display, comprising:

finding a number of features;

for each of a range of test H_{total} values,

calculating a pixel co-ordinate value for each of the found features;

determining a pixel co-ordinate remainder value associated with each of the pixel co-ordinate values; and

determining a maximum gap value of the pixel co-ordinate remainder values associated with a true horizontal resolution.

2. (Original) A method as recited in claim 1, wherein the range of test H_{total} values is based upon the first test H_{total} value and the second test H_{total} value.

3. (Original) A method as recited in claim 1 wherein the determining a maximum gap value comprises:

plotting the pixel co-ordinate remainder values in a remainder space associated with each of the range of test H_{total} values; and

comparing a first selected one of the plotted pixel co-ordinate remainder values with a second selected one of the plotted pixel co-ordinate remainder values.

4. (Original) A method as recited in claim 3, wherein the comparing is a subtraction.

5. (Original) A method as recited in claim 2 further comprising:

determining if either the first test Htotal value or the second test Htotal value is the true Htotal value.

6. (Original) A method as recited in claim 3, wherein the plotted pixel co-ordinate values are offset by a phase differential.

7. (Original) A method as recited in claim 6, wherein the phase differential is based upon a difference between a true phase and a current phase.

8. (Original) An apparatus for automatically providing a horizontal synchronization of an analog signal to a digital display, comprising:

means for finding a number of features;

for each of a range of test Htotal values,

means for calculating a pixel co-ordinate value for each of the found features;

means for determining a pixel co-ordinate remainder value associated with each of the pixel co-ordinate values; and

means for determining a maximum gap value of the pixel co-ordinate remainder values associated with a true horizontal resolution.

9. (Original) An apparatus as recited in claim 8, wherein the range of test Htotal values is based upon the first test Htotal value and the second test Htotal value.

10. (Original) An apparatus as recited in claim 8 wherein the means for determining a maximum gap value comprises:

means for plotting the pixel co-ordinate remainder values in a remainder space associated with each of the range of test H_{total} values; and

means for comparing a first selected one of the plotted pixel co-ordinate remainder values with a second selected one of the plotted pixel co-ordinate remainder values.

11. (Original) An apparatus as recited in claim 10, wherein the comparing is a subtraction.

12. (Original) An apparatus as recited in claim 9 further comprising:

means for determining if either the first test H_{total} value or the second test H_{total} value is the true H_{total} value.

13. (Original) An apparatus as recited in claim 10, wherein the plotted pixel co-ordinate values are offset by a phase differential.

14. (Original) An apparatus as recited in claim 13, wherein the phase differential is based upon a difference between a true phase and a current phase.

15. (New) Computer program product for automatic generation of horizontal synchronization of an analog signal to a digital display, comprising:

computer code for finding a number of features;

computer code for calculating a pixel co-ordinate value for each of the found features for each of a range of test H_{total} values;

computer code for determining a pixel co-ordinate remainder value associated with each of the pixel co-ordinate values for each of a range of test H_{total} values;

for each of a range of test Htotal values, determining a maximum gap value of the pixel co-ordinate remainder values associated with a true horizontal resolution; and
computer readable medium for storing the computer code.

16. (New) Computer program product as recited in claim 15, wherein the range of test Htotal values is based upon the first test Htotal value and the second test Htotal value.

17. (New) Computer program product as recited in claim 15 wherein the determining a maximum gap value comprises:

computer code for Htotal values, plotting the pixel co-ordinate remainder values in a remainder space associated with each of the range of test Htotal values; and

computer code for comparing a first selected one of the plotted pixel co-ordinate remainder values with a second selected one of the plotted pixel co-ordinate remainder values.

18. (New) Computer code as recited in claim 17, wherein the comparing is a subtraction.

19. (New) Computer program product as recited in claim 16 further comprising:
computer code for determining if either the first test Htotal value or the second test Htotal value is the true Htotal value.

20. (New) Computer program product as recited in claim 18, wherein the plotted pixel co-ordinate values are offset by a phase differential.

21. (New) Computer program product as recited in claim 20, wherein the phase differential is based upon a difference between a true phase and a current phase.